

**MILLENNIALS' KNOWLEDGE SHARING BEHAVIOUR VIA SOCIAL MEDIA:  
THE EFFECTS OF RECIPROCITY, EXTROVERSION AND COLLABORATIVE LEARNING STYLE**

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**Abstract**

This research aims to study the relationships between collaborative learning style, reciprocity and extroversion on knowledge sharing behavior via social media among university students at Universiti Utara Malaysia (UUM). Respondents comprise undergraduate students from three (3) academic colleges in UUM, namely the College of Business (COB), the College of Arts and Sciences (CAS) and the College of Law, Government and International Studies (COLGIS). ANOVA and regression analysis were performed to test the hypotheses of the study. The result indicated that collaborative learning, reciprocity and extroversion were significant predictors of knowledge sharing behavior via social media.

**Keywords:** Knowledge sharing, collaborative learning style, reciprocity, extroversion, social media

**Introduction**

Effective knowledge management occurs in organization whereby employees are eager to share their knowledge among themselves (Amanyah, 2013). Knowledge sharing was one of the main reasons for instituting Knowledge Management in Malaysia organizations (Chong, 2013). Most of the previous studies on knowledge sharing have been undertaken in corporate settings, however, knowledge sharing among students via social media has been less explored. Social media play a vital role in the lives of undergraduate students in Malaysian universities who comprises mostly generation young (Gen-Y), which is first generation who spend their entire lives in the digital environment (Bennett et al., 2008; Wesner and Miller, 2008). Gen-Y are technologically savvy, better learners, more open to change and efficient multi-tasking (NAS, 2006).

Collaborative learning involves active knowledge sharing among students which can result in better academic performance, enhanced social and interpersonal skills (Majid & Chitra, 2013). Several studies have highlighted knowledge and information sharing play important role in learning and personal development (Robson et al, 2003; Rafaeli & Ravid, 2003). According to Falk and Fischbacher (2006) reciprocity has positively influence on attitudes toward knowledge sharing behavior in online setting. In addition, Furthermore, Cyr & Choo (2010) also highlighted that reciprocity together with trust promotes knowledge sharing. Furthermore, Wasko and Faraj (2005) who have found a positive effect between reciprocity and knowledge sharing in the online network environment. Personality traits have the potential to influence individual's knowledge sharing behaviour. Chong, Teh and Tan (2014) found a positive relationship between knowledge sharing with extroversion and conscientiousness.

The objective of this research is to study the effect of collaborative learning style, reciprocity and extroversion on students' knowledge sharing behaviour among peers via social media. The research framework for this study is presented in the following diagram.

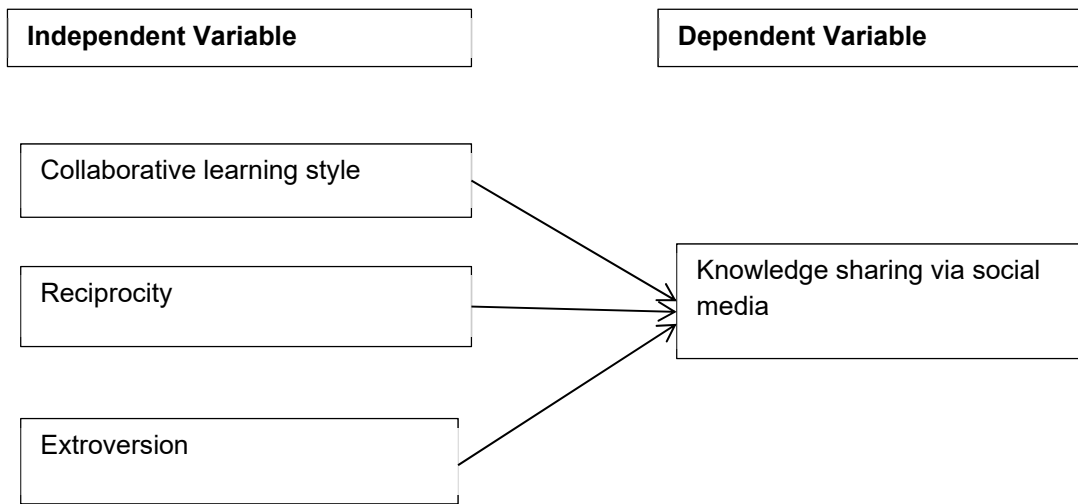


Figure.1 Research Framework

Table 1 Measurement of variables

The variables in this study are measured using instruments adapted from previous studies as listed in the table 1 below:

Table 1 Measurement of variables

Variables	Total items	Scales	Sources (Author Adapted)
1 Knowledge sharing behavior	8	5 Point Likert Scale	Davenport and Prusak (2000) Hsu, M. H., Ju, T. L.; Yen, C. H., and Chang, C. M. (2007)
2 Collaborative Learning Style	10	5 Point Likert Scale	Riechmann and Grasha (1974)
3 Reciprocity	3	5 Point Likert Scale	Bock, G. W.; Zmud, R. W; Kim, Y. G., and Lee, J. N. (2005)
4 Extroversion	7	5 Point Likert Scale	Goldberg (1992)

## Findings and Discussion

A total of 370 university students participated in this study. However, only 363 sets of questionnaires are usable in order to run the analysis. Reliability analysis was performed on the data to measure the reliability of scales and internal consistency of the scales that were used. The result of the reliability analysis was in the range of 0.61 to 0.83 as shown on Table 2.

Table 2 Reliability Statistic

Variable	Number of items	Cronbach Alpha
Knowledge sharing behaviour	8	0.74
Collaborative learning style	10	0.83
Reciprocity	3	0.73
Extroversion	7	0.61

The one way ANOVA analysis was used to test the differences in mean score among different group of respondents. In this study, one way ANOVA analysis was used to examine whether there are significant differences in the mean scores on the dependent variable (knowledge sharing behaviour) across the three groups: college groups, religion groups and races groups. The results indicated that there is no statistical significant difference in mean scores between three college groups and knowledge sharing behaviour.

Table 3: ANOVA Tests Result for College

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.004	2	.002	.004	.996
Within Groups	185.204	367	.505		
Total	185.208	369			

ANOVA analysis was also used to explore the impact of religion on knowledge sharing behaviour. Respondents were divided into six groups (Islam, Buddha, Christian, Catholic, India, Others). There is statistical difference at the  $p < 0.003$  level in knowledge sharing behaviour for six religion groups. There is statistically significant difference in knowledge sharing behaviour between Islam and Buddha at  $p\text{-value} = 0.03 < 0.05$ .

Table **Error! No text of specified style in document.:** ANOVA Test Result for Religion

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.01	5	1.80	3.65	.003
Within Groups	176.29	357	0.49		
Total	185.30	362			

Multiple Comparisons

		Mean Difference		Sig.
(I) RELIGION	(J) RELIGION	(I-J)	Std. Error	
ISLAM	BUDDHA	0.25	.081	0.03
	CHRISTIAN	0.54	0.30	0.44
	CATHOLIC	-0.40	0.32	0.80
	HINDU	-0.17	0.23	0.98
	OTHERS	-0.40	0.32	0.80
BUDDHA	ISLAM	-0.25	.081	0.03
	CHRISTIAN	0.29	0.30	0.92
	CATHOLIC	-0.65	0.32	0.33
	HINDU	-0.41	0.23	0.48
	OTHERS	-0.65	0.32	0.33
CHRISTIAN	ISLAM	-0.54	0.29	.044
	BUDDHA	-0.29	0.29	0.92
	CATHOLIC	-0.94	0.43	0.32
	HINDU	-0.70	0.36	0.37
	OTHERS	-0.94	0.43	0.25
CATHOLIC	ISLAM	0.40	0.32	0.78
	BUDDHA	0.65	0.32	0.49
	CHRISTIAN	0.94	0.43	0.32
	HINDU	0.24	0.39	0.96
	OTHERS	0.00	0.44	1.00
HINDU	ISLAM	0.17	0.23	0.97
	BUDDHA	0.41	0.23	0.45
	CHRISTIAN	0.70	0.36	0.37
	CATHOLIC	-0.24	0.39	0.96
	OTHERS	-0.24	0.39	1.00
OTHERS	ISLAM	0.40	0.32	0.82
	BUDDHA	0.65	0.32	0.33
	CHRISTIAN	0.94	0.43	0.25
	CATHOLIC	0.00	0.44	1.00
	HINDU	0.24	0.39	1.00

\*. The mean difference is significant at the 0.05 level.

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A one way between groups analysis of variance was conducted to explore the impact of race on knowledge sharing behaviour score. Respondents were divided into four race groups (Malay, Chinese, India, Others). There was statistical difference at the  $p < 0.05$  level in knowledge sharing behaviour for four groups  $F(3, 369) = 3.24, p < 0.05$ . There is statistically significant difference in knowledge sharing behaviour between Malay and Chinese at  $p\text{-value} = 0.030 < 0.05$ .

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Table 5: ANOVA tests result for race

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.661	3	1.887	3.771	0.011
Within Groups	179.634	359	.500		
Total	185.295	362			

Multiple Comparisons

(I) RACE	(J) RACE	Mean Difference (I-J)	Std. Error	Sig.
MALAY	CHINESE	.23555	.07985	.018
	INDIA	-.16875	.22872	.882
	OTHERS	-.17670	.21855	.850
CHINESE	MALAY	-.23555	.07985	.018
	INDIA	-.40430	.23268	.306
	OTHERS	-.41226	.22269	.251
INDIA	MALAY	.16875	.22872	.882
	CHINESE	.40430	.23268	.306
	OTHERS	-.00795	.30907	1.000
OTHERS	MALAY	.17670	.21855	.850
	CHINESE	.41226	.22269	.251
	INDIA	.00795	.30907	1.000

\*. The mean difference is significant at the 0.05 level.

Multiple regression analysis was performed to study the effects of identify the effects of collaborative learning style, reciprocity and extroversion on knowledge sharing among undergraduates via social media.

Table 6: Multiple Regression Analysis

Model	R	R Square	Adjusted R Square
1	.510 <sup>a</sup>	.260	.254

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	48.242	3	16.081	42.122	.000
Residual	137.053	359	.382		
Total	185.295	362			

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Overall, the result for regression analysis are significant at  $p < .000$ . The predictors (collaborative learning style; reciprocity; extroversion) in the proposed model revealed 26 percent of the observed variance in knowledge sharing. The regression model show 74 percent of knowledge sharing among undergraduate students via social media is not depicted in the model.

Further analysis also revealed all of the independent variables are significant ( $p < .000$ ) as indicated in Table 7 below. Reciprocity is the most important factor that affect on undergraduate students toward knowledge sharing (6.1). This followed by collaborative learning style (3.8) and extroversion (3.3).

Table 7 Coefficient of Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.479	.297		1.612	.108
Collaborative learning style	.265	.070	.196	3.776	.000
Reciprocity	.287	.047	.308	6.131	.000
Extroversion	.240	.073	.162	3.263	.001

## Conclusion

This study have shown that collaborative learning style, reciprocity and extroversion have positive significant relationship with knowledge sharing among undergraduate students in UUM. There are several limitations in this study. Regression analysis have verified that collaborative learning style, reciprocity and extroversion explain only 26% of knowledge sharing behaviour among undergraduate in UUM via social media. Future studies can include others factors such as trust, attitude and perceived behavioural control which are not included in the model.

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